



IPW

101995.013901

THE UNITED STATES PATENT AND TRADEMARK OFFICE

SVETLANA A. SUKHISHVILI, et al.

Group Art Unit: 1615

Serial No. 10/624,993

Examiner: HELM, Caralynne

Confirmation No.: 8177

Filed: July 22, 2003

For: METHODS FOR CONTROLLED
RELEASE OF MOLECULES FROM
LAYERED POLYMER FILMS

I hereby certify that this correspondence is being deposited with the United States Postal Service, via First Class Mail US, postage prepaid, to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on

9-19-08

(Date of Deposit)

(Signature)

Mary J. Sukhishvili

9-19-08

(Date)

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Sir:

In accordance with the provisions of 37 C.F.R. §§1.97 and 1.98, applicants and their attorney respectfully request that the following documents be made of record in the official United States Patent and Trademark Office ("USPTO") file relating to the above-identified application. The citation of these documents should not be construed as an admission that they constitute statutory prior art with respect to the present invention. In accordance with 37 C.F.R. §1.98(a)(2)(ii), copies of the following U.S. patents and U.S. publications are not submitted herewith. Copies of listed non-patent literature are enclosed herewith, except as noted below.

U.S. Patent Nos.

6,511,749

U.S. Patent Application Publication Nos.

2004/0013721 A1
2005/0163714 A1

Foreign Patent Documents

WO 99/47252
WO 02/17888

Non-Patent Literature

J. Kost, R. Langer, Responsive Polymeric Delivery Systems,
46 ADVANCED DRUG DELIVERY REVIEWS 125-148 (2001)

G.B. Sukhorukov et al., pH Controlled Macromolecule Encapsulation in and Release
from Polyelectrolyte Multilayer Nanocapsules, 22 MACROMOL. RAPID COMMUN. 44
(2001)

G. Decher and J.D. Hong, Buildup of Ultrathin Multilayer Films by a Self-Assembly
Process: I. Consecutive Adsorption of Anionic and Cationic Bipolar, 46 MACROMOL.
SYMP. 321 (1991).

P. Fisher, et al., Polyelectrolytes Bearing Azobenzenes for the Functionalization of
Multilayers, 137 MACROMOL. SYMP. 1 (1999)

G.B. Sukhorukov et al., Stepwise Polyelectrolyte Assembly on Particle Surfaces: a
Novel Approach to Colloid Design, 9 POLYM. ADV. TECHNOL. 759 (1998)

A.A. Antipov, et al., Sustained Release Properties of Polyelectrolyte Multilayer Capsule,
105 J. PHYS. CHEM. B 2281 (2001)

X. Qiu et al., Permeability of Ibuprofen in Various Polyelectrolyte Multilayers,
286 MATER. ENG. 591 (2001)

F. Caruso et al., Microencapsulation of Uncharged Low Molecular Weight Organic
Materials by Polyelectrolyte Multilayer Self-Assembly, 16 LANGMUIR 8932 (2000)

F. Caruso et al., Enzyme Encapsulation in Layer-by-Layer Engineered Polymer
Multilayer Capsules, 16 LANGMUIR 1485 (2000)

F. Albert Cotton and Geoffrey Wilkinson, ADVANCED INORGANIC CHEMISTRY 90-94
(5th Ed., 1988)

- G.B. Sukhorukov et al., Layer-by-Layer Self Assembly of Polyelectrolytes on Colloidal Particles, 137 COLLOIDS SURF. A: Physiochem. Eng. Aspects 253 (1998)
- F. Caruso et al., Electrostatic Self-Assembly of Silica Nanoparticle-Polyelectrolyte Multilayers on Polystyrene Latex Particles, 120 J. AM. CHEM. SOC. 8523 (1998)
- J.B. Schlenoff et al., Sprayed Polyelectrolyte Multilayers, 16, LANGMUIR 9968 (2000)
- G.B. Sukhorukov et al., Microencapsulation by Means of Step-Wise Adsorption of Polyelectrolytes, 17 J. MICROENCAPSULATION 177 (2000)
- V. Kozlovskaya et al., Hydrogen-Bonded Polymer Capsules Formed by Layer-by-Layer Self-Assembly, 36 MACROMOLECULES 8590-8592 (2003)
- Shi et al., Release Behavior of Thin-Walled Microcapsules Composed of Polyelectrolyte Multilayers LANGMUIR 2036 (2001)
- A. A. Antipov et al., Carbonate Microparticles for Hollow Polyelectrolyte Capsules Fabrication, 224 COLLOIDS SURF. A: Physiochem. Eng. Aspects 175 (2003)
- M. Adamczyk et al., Immunoassay Reagents for Thyroid Testing 1. Synthesis of Thyroxine Conjugates, 5 BIOCONJUGATE CHEM. 459 (1994)
- T. Serizawa et al., Thermoresponsive Ultrathin Hydrogels Prepared by Sequential Chemical Reactions, 35 MACROMOLECULES 2184 (2002)
- Antipov et al., Polyelectrolyte Multilayer Capsule Permeability Control, 198-200 COLLOIDS AND SURFACES A: PHYSIOCHEM. ENG. ASPECTS (2002) 535
- Shchukin et al., Micron-Scale Hollow Polyelectrolyte Capsules with Nanosized Magnetic Fe₃O₄ Inside, 57 MATERIALS LETTERS 1743 (2003)
- A. Janekovic et al., Preparation of Monodispersed Colloidal Cadmium Compounds, 103 J. COLLOID INTERFACE SCI. 436 (1985)
- A. Antipov et al., Urease-Catalyzed Carbonate Precipitation Inside the Restricted Volume of Polyelectrolyte Capsules, 24 MACROMOL. RAPID COMMUN. 274 (2003)

Applicants' attorney notes that all of the above-listed documents are in the English language, with the exception of International (PCT) Publication No. WO 99/47252, which is in the German language. The English-language abstract published with the aforesaid PCT publication is provided herewith. If the Examiner wishes to have a translation of the entire application, or any portion thereof, Applicants will endeavor to

provide one.

Applicants respectfully bring the following non-patent references to the Examiner's attention: K. Park, Controlled Drug Delivery: Challenges and Strategies, (Am. Chem. Soc., Washington, D.C., 1997); and R.F. Egerton, Electron Energy-Loss Spectroscopy in the Electron Microscope (2nd Ed., 1996). These references were cited in U.S. Patent Application No. 10/954,922 ("the '922 Application", cited herein as U.S. Patent Application Publication No. 2005/0163714), which is commonly-owned with the present application. Copies of these references are not submitted herewith because of their voluminous nature and the likelihood that they are available to the Examiner. If, however, the Examiner so requests, Applicants will endeavor to provide copies of the materially relevant sections.

Applicants also direct the Examiner's attention to an Office Action received in the aforesaid '922 Application, and an International Search Report/International Preliminary Report on Patentability received in International (PCT) Application No. PCT/US 2004/032491, which is the PCT counterpart of the '922 Application. Copies of these documents are provided herewith.

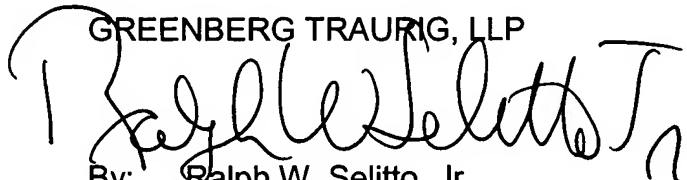
In order to facilitate the Examiner's citation of the documents identified herein, applicants' attorney has completed United States Patent and Trademark Office Forms PTO/SB/08A and PTO/SB/08B. The completed forms are attached hereto for the Examiner's convenience.

The Examiner is hereby authorized to debit Deposit Account No. 501561 in the amount of \$180 for filing of the Supplemental Information Disclosure Statement, since it is being submitted after mailing of the first Office Action on the merits in the present application, but before the mailing of a final action. No other fees are believed

to be due as a result of the filing of this Supplemental Information Disclosure Statement.
If any additional fees are due, the Examiner is hereby authorized to charge them to
Deposit Account No. 501561.

Respectfully Submitted,

GREENBERG TRAURIG, LLP

A handwritten signature in black ink, appearing to read "Ralph W. Selitto, Jr.", is written over the printed name.

By: Ralph W. Selitto, Jr.
Reg. No. 26,996

GREENBERG TRAURIG, LLP
200 Park Ave.
P.O. Box 677
Florham Park, NJ 07932
(973) 443-3550 Direct
(973) 295-1309 Fax
selittor@gtlaw.com